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CENTRAL FAX CENTER****APR 03 2007****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No. : 10/798,460
Inventor(s) : Erica L. Evans et al.
Filed : March 11, 2004
Art Unit : 1617
Examiner : Gina C. Yu
Docket No. : CM2731
Confirmation No. : 6115
Customer No. : 27752
Title : Skin Care Compositions the Increase and Repair Skin
Barrier Function

DECLARATION UNDER 37 C.F.R. § 1.132

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Washington, D.C. 20231

Dear Sir:

I, Alison Stephens, do hereby declare as follows:

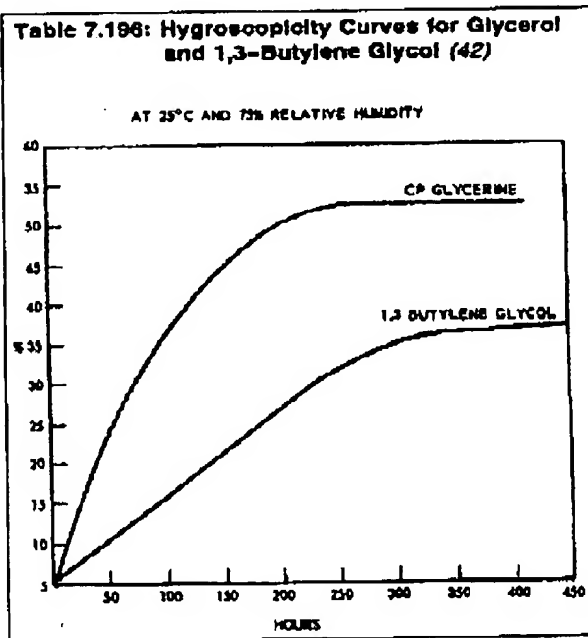
1. I am a graduate of the Nottingham University having received a Masters degree (1st Class) in Chemical Engineering from said institution in July 1992. I have been employed by The Procter & Gamble Company at the Rusham Park Technology Center, Egham, UK, assignee of the present application, since September 1992. During this time, I have worked in the areas of personal cleansing, colour cosmetics and skin care.
2. I am familiar with the subject matter and the claims of the present application.
3. In the Office Action dated January 3, 2007, the Examiner asserts, "Since glycerine and 1,3-butylene glycol are art-recognized functional equivalents that are added or substituted in place of the other, it is viewed that a skilled artisan would have

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discovered an optimum weight amount of these glycols to render desired humectancy by routine experimentations." The Examiner fails to appreciate underlying characteristics that differentiate glycerine and 1,3-butylene glycol.

4. Glycerine has a much higher dielectric constant compared to 1,3-butylene glycol. Glycerine has a dielectric constant (ϵ_r) of 46.5 and 1,3-butylene glycol has a dielectric constant of 28.8.¹ Moisturisation efficacy of a material is measured via a corneometer that measures the capacitance of a dielectric medium. Therefore, materials with higher dielectric constants provide higher corneometer values and are viewed as more efficient moisturisers. Net, to provide comparable moisturisation more butylene glycol would be needed to compensate for the lower dielectric constant. This is inefficient and costly and can increase inherent stickiness of the formulation.

5. Glycerine has far greater hygroscopicity than 1,3-butylene glycol. Hygroscopicity curves² of glycerine and 1,3-butylene glycol (see table 7.196) evidences the far superior hygroscopic character of glycerine. Hygroscopicity is a measure of a material's ability to attract water from the environment. Glycerine attracts more water at a faster rate than 1,3 butylene glycol. Since water has a very high dielectric constant ($\epsilon_r \approx 80$), a material that attracts more water will have greater moisturisation efficacy as measured via a corneometer. Lower hygroscopicity can be compensated for by using more material, but, as presented in



¹ CRC Handbook of Chemistry and Physics, 78th ed., pp 6.144-6.146.

² Industrial Solvents Handbook, 5th ed., p 438.

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paragraph 4, using more 1,3 butylene glycol is inefficient, costly, and can increase the stickiness of the formulation.

6. Glycerine has a larger dielectric constant and greater hygroscopicity compared to 1,3 butylene glycol. The net effect is superior moisturisation by using a high dielectric humectant that also holds onto lots of water. The combination will provide the highest readings on the corneometer. Any attempt to substitute 1,3 butylene glycol for glycerine will require a far greater percentage of 1,3 butylene glycol to compensate for both the reduced dielectric constant and hygroscopicity. A person skilled in the formulation of skin care products will recognize that increasing the percentage of 1,3 butylene glycol in a composition is inefficient and costly. Also, increasing the percentage of 1,3 butylene glycol results in a composition having undesirable stickiness.
7. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed true. This declaration is made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001, and may jeopardize the validity of the above-captioned patent application or any patent issuing thereon.

By: *A. Stephens*
Alison Stephens

26/3/07
Date

18 U.S.C. §1001 Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals or covers up by any trick, scheme, or advice a material fact, or makes any false, fictitious or fraudulent statement or representation, or makes or uses any false writing or document knowing the same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.